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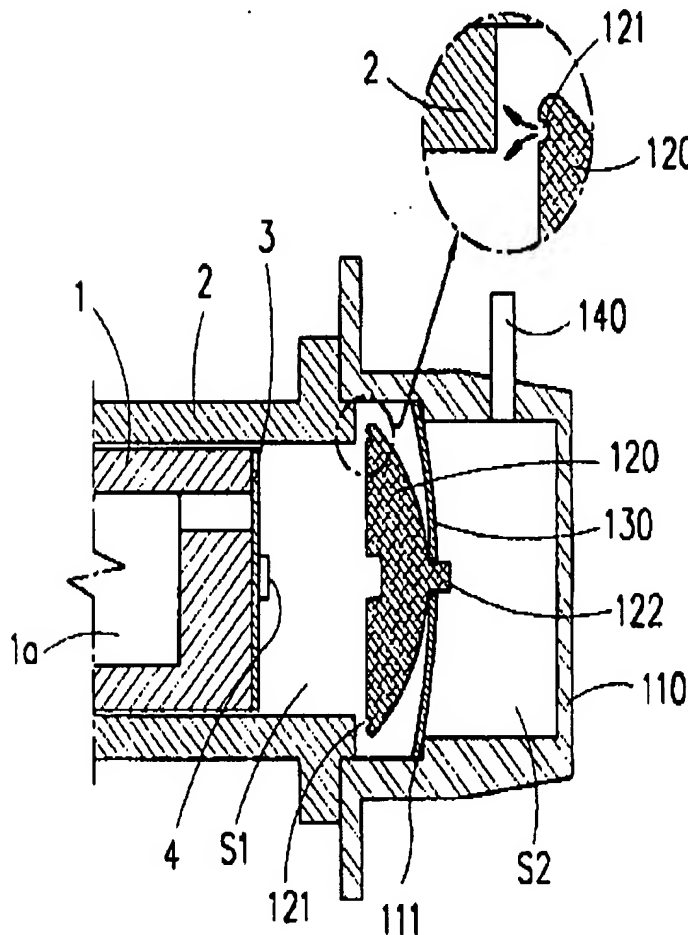
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(30) Priority:

(54) Title of Invention

STRUCTURE OF DAMPING GAS OF VENT VALVE ASSEMBLY

Representative drawing



(57) Abstract:

PURPOSE: A structure of damping gas of a vent valve assembly is provided to minimize noise and vibration occurring when a vent valve returns to the front end face of a cylinder by using gas vented to a venting space.

CONSTITUTION: By backing up a piston (1), new coolant gas is flowed via a coolant passage(1a) of the piston and then flowed into a compressing space(S1) by opening a suction valve(3) installed in the front face of the piston. When the piston moves forward, the coolant gas is compressed by being pushed by the piston and flowed into a venting space (S2) of vent covers(110) while pushing vent valves(120) at a certain point of time. When the piston backs up, the compressing space is in low pressure state compared to the venting space and the vent valves returns to the front end face of a cylinder(2) by the returning force of valve springs(130). Thus, the compressing space is divided from the venting space. A portion of gas flowing into the venting space from the cylinder is flowed into a gas residual groove of the cylinder or the vent valve and is stagnated in the groove. The stagnated gas generates buffering force on the front end face of the cylinder when the vent valve returns. The shock between the cylinder and the vent valve is buffered.

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